

CLAIMS

What is claimed is:

- 1 1. A sound generation device comprising:
2 an audio source to generate an audio signal;
3 a radio frequency (RF) transmitter, coupled to the audio source, to transmit an RF
4 carrier signal modulated with the audio signal, the RF carrier signal having a specific carrier
5 frequency; and
6 a channel locator controller to identify an available carrier frequency.
- 1 2. The sound generation device recited in claim 1, wherein the channel locator controller
2 comprises:
3 an RF receiver, coupled to the RF transmitter, to receive RF signals having different
4 carrier frequencies; and
5 a channel locator circuit, coupled to the RF receiver, to identify a carrier frequency
6 below a minimum signal strength.
- 1 3. The sound generation device recited in claim 1, wherein the channel locator controller
2 comprises:
3 a stored program digital computer, the computer to store a database of available carrier
4 frequencies arranged by geoposition; and
5 a geoposition source coupled to the stored program digital computer to provide a
6 geoposition to the stored program digital computer.
- 1 4. The sound generation device recited in claim 1, wherein the geoposition source
2 comprises an element from the group comprising a cellular phone, a GPS receiver, a
3 geoposition programming device, a data entry device, and a programmable read only memory.
- 1 5. The sound generation device recited in claim 1, wherein the sound generation device
2 further comprises:

3 a channel selection circuit, coupled to the RF transmitter, to select an available carrier
4 frequency on which to transmit the RF carrier signal.

1 6. The sound generation device recited in claim 1, wherein the sound generation device
2 comprises equipment from the group comprising an MP3 player, a CD player, a mini-disk
3 player, a micro-disk player, a DVD player, a cassette tape player, a radio, a cellular phone, a
4 handheld computer, a portable computer, a television, a video player, a personal digital
5 assistant, an electronic musical instrument, an electronic toy, and a wireless microphone.

1 7. A sound reproduction system comprising:
2 a radio frequency (RF) receiver, including an RF tuner to tune the RF receiver to one
3 of a plurality of RF channels;
4 an amplifier coupled to the RF receiver;
5 a sound transducer coupled to the amplifier; and
6 a channel selection circuit, coupled to the RF tuner, to receive a channel selection
7 signal from an ancillary device, the channel selection signal to tune the RF tuner to one of the
8 plurality of RF channels whose signal strength is below a predetermined minimum value.

1 8. The sound reproduction system recited in claim 7, wherein the sound reproduction
2 system is from the group comprising a vehicular entertainment system, a home entertainment
3 system, and a portable entertainment system.

1 9. The sound reproduction system recited in claim 7, wherein the ancillary device is from
2 the group comprising an MP3 player, a CD player, a mini-disk player, a micro-disk player, a
3 DVD player, a cassette tape player, a radio, a cellular phone, a handheld computer, a portable
4 computer, a television, a video player, an electronic musical instrument, an electronic toy, and
5 a wireless microphone.

1 10. A method of operating a radio frequency (RF) receiver comprising:
2 determining whether a carrier is received at a first frequency; and

3 if so, marking the first frequency as unavailable and repeating the determining
4 for a second frequency;
5 otherwise, marking the first frequency as available.

1 11. The method recited in claim 10 and further comprising:
2 displaying at least one available frequency.

1 12. The method recited in claim 10 and further comprising:
2 selecting at least one available frequency.

1 13. The method recited in claim 10 and further comprising:
2 evaluating available frequencies; and
3 marking an optimum available frequency from the available frequencies.

1 14. The method recited in claim 13 and further comprising:
2 displaying the optimum available frequency.

1 15. The method recited in claim 13 and further comprising:
2 selecting the optimum available frequency.

1 16. A method of operating a radio frequency (RF) transceiver comprising:
2 determining whether a carrier is received at a first frequency; and
3 if so, marking the first frequency as unavailable and repeating the determining
4 for a second frequency;
5 otherwise, transmitting on the first frequency.

1 17. The method recited in claim 16 and further comprising:
2 displaying the first frequency.

1 18. The method recited in claim 16, wherein the RF transceiver comprises an audio source,
2 and wherein in transmitting the audio source is transmitted on the first frequency.

1 19. The method recited in claim 18, wherein the audio source comprises prerecorded audio
2 material.

1 20. The method recited in claim 18, and further comprising:
2 transmitting a channel selection signal before transmitting the audio source.

1 21. The method recited in claim 18, and further comprising:
2 between determining and transmitting, repeating the determining until at least two
3 available frequencies are located;
4 evaluating the at least two available frequencies; and
5 marking an optimum available frequency from the at least two available frequencies.

1 22. The method recited in claim 21 and further comprising:
2 displaying the optimum available frequency.

1 23. The method recited in claim 21, and further comprising:
2 transmitting a channel selection signal comprising the optimum available frequency
3 before transmitting the audio source.

1 24. A method of operating a portable entertainment system comprising a radio frequency
2 (RF) transmitter and a geoposition source, the method comprising:
3 determining whether a geoposition of the portable entertainment system has changed;
4 if not, repeating the determining;
5 otherwise, obtaining a new geoposition from the geoposition source;
6 using the new geoposition to find an available transmission frequency; and
7 transmitting audio material from an audio source on the available transmission
8 frequency.

1 25. The method recited in claim 24, wherein the geoposition source is obtained from an
2 element from the group comprising a cellular phone, a GPS receiver, a keyboard, a set of
3 switches, and a programmable read only memory.

1 26. The method recited in claim 24 and further comprising:
2 displaying the available transmission frequency.

1 27. The method recited in claim 24 and further comprising:
2 transmitting a channel selection signal comprising the available transmission
3 frequency before transmitting the audio material.

1 28. A method of operating a sound reproduction system comprising a radio frequency
2 (RF) receiver, the method comprising:
3 selecting an FM channel, within a broadcast band ranging from 87.7 to 107.9
4 megahertz, whose carrier signal strength is below a predetermined minimum value;
5 operating the RF receiver to receive audio material on the FM channel from an
6 ancillary device;
7 amplifying the audio material using an amplifier coupled to the RF receiver; and
8 reproducing the audio material through a sound transducer coupled to the amplifier.

1 29. The method recited in claim 28, wherein selecting is performed upon receipt of a
2 channel selection signal from the ancillary device.

1 30. The method recited in claim 29, wherein the channel selection signal is received by the
2 RF receiver, prior to the audio material, via a transmission medium from the group comprising
3 a light-beam transmission, an RF transmission outside the broadcast band, or a wireline
4 transmission.

1 31. A computer-readable medium containing computer instructions for instructing a
2 processor, the processor for use in a portable entertainment system comprising a radio

3 frequency (RF) transmitter to transmit audio source material to a sound reproduction system
4 over a transmission channel, wherein the instructions comprise:
5 responding to a request for an available transmission channel;
6 receiving geolocation information; and
7 determining an available transmission channel based upon the geolocation
8 information.

1 32. The computer-readable medium recited in claim 31, wherein receiving comprises
2 processing data originating from a device from the group comprising a cellular phone, a GPS
3 receiver, a keyboard, a set of switches, and a programmable read only memory.

1 33. The computer-readable medium recited in claim 31, wherein determining comprises
2 finding an available transmission channel in a database using the geolocation information.